

**CAMECO RESOURCES
CROW BUTTE OPERATION**



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April 23, 2015

ATTN: Document Control Desk Director
Office of Nuclear Material Safety and Safeguards
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Semiannual Radiological Effluent and Environmental Monitoring Report
Source Materials License # SUA-1534, Docket No. 40-8943

Dear Document Control:

By letter dated February 26, 2015, Crow Butte Resources, Inc. submitted one copy of the Semiannual Radiological Effluent and Environmental Monitoring Report for the Crow Butte Uranium Project. The report is provided in accordance with License Condition 11.1(B) of Source Materials License SUA-1534 and 10 CFR Part 40. The report covered the third and fourth quarters of 2014. Crow Butte has discovered that the data sheets submitted in Appendix D were incomplete and did not include the Deep Disposal Well data for December 2014. Please find enclosed the replacement pages for this report.

If you have any questions concerning the report, please feel free to call me at (308) 665-2215 ext. 114.

Sincerely,
CAMECO RESOURCES

Larry Teahon
Manager of Safety, Health, Environment, & Quality

cc: Ron Burrows - NRC
Nancy Harris - NDEQ, Lincoln Office
CBO File

cc: CR - Casper Office

AM 5520

Crow Butte Uranium Mine
Deep Disposal Well #1 Injection Radiological Data

| Month | Total Gallons Injected | Average Natural Uranium (mg/l) | Total Natural Uranium Injected (mg) | Total Natural Uranium Injected (μCi) | Average Radium-226 (pCi/l) | Total Radium-226 Injected (μCi) |
|--------------|------------------------|--------------------------------|-------------------------------------|---|----------------------------|--|
| July-14 | 8,510,580 | 5 | 1.61E+08 | 1.09E+05 | 1,360 | 4.38E+04 |
| August-14 | 8,046,324 | 6 | 1.83E+08 | 1.24E+05 | 1,340 | 4.08E+04 |
| September-14 | 8,510,580 | 5 | 1.61E+08 | 1.09E+05 | 1,360 | 4.38E+04 |
| October-14 | 9,108,009 | 4 | 1.38E+08 | 9.34E+04 | 937 | 3.23E+04 |
| November-14 | 7,573,418 | 5 | 1.43E+08 | 9.70E+04 | 1,060 | 3.04E+04 |
| December-14 | 7,895,884 | 4 | 1.20E+08 | 8.09E+04 | 850 | 2.54E+04 |
| Totals | 49,644,795 | | 9.06E+08 | 6.13E+05 | | 2.17E+05 |

Crow Butte Uranium Mine
Deep Disposal Well #2 Injection Radiological Data

| Month | Total Gallons Injected | Average Natural Uranium (mg/l) | Total Natural Uranium Injected (mg) | Total Natural Uranium Injected (μCi) | Average Radium-226 (pCi/l) | Total Radium-226 Injected (μCi) |
|--------------|------------------------|--------------------------------|-------------------------------------|---|----------------------------|--|
| July-14 | 1,465,597 | 1 | 5.55E+06 | 3.76E+03 | 973 | 5.40E+03 |
| August-14 | 1,489,622 | 1 | 5.64E+06 | 3.82E+03 | 780 | 4.40E+03 |
| September-14 | 1,465,597 | 1 | 5.55E+06 | 3.76E+03 | 973 | 5.40E+03 |
| October-14 | 1,538,981 | 1 | 5.83E+06 | 3.94E+03 | 1,250 | 7.28E+03 |
| November-14 | 1,375,108 | 1 | 5.21E+06 | 3.52E+03 | 860 | 4.48E+03 |
| December-14 | 1,499,470 | 1 | 5.68E+06 | 3.84E+03 | 542 | 3.08E+03 |
| Totals | 8,834,375 | | 3.34E+07 | 2.26E+04 | | 3.00E+04 |